

Ultra-Low Pressure Generating and Documenting Calibrator

Micro-Cal™ Model 869



The Ultimate Low Pressure Solution

Immediate ROI

Reduces labor by 75%

Fast and Easy Calibration

Menu driven operator interface

Superior Performance

Control Stability and Precision to 0.0002" W.C.

NASA Patented Technology

Lowest Pressure Generating Capability

setra

Highest accuracy to support certification of all low DP critical process pressure sensors

- True low range dual reference pressure sensors with NIST traceability
- Dual reference design provides maximum accuracy, repeatability and resolution

Pressure Generation

- User selectable automated pressure generation profiles with up to 101 calibration points
- Enhanced patented NASA low pressure generating technology - achieves ± 0.0002 in. W.C. low pressure regulation - micro in. of W.C. per step resolution
- True differential pressure generation - both high and low pressure ports connect to the unit under test, providing isolation from process background pneumatic disturbances
- True zero pressure generation - high and low pressure ports shorted to produce stable, noise-free zero pressure input - outperforming competitive active zero pressure control systems

Measurement

Accuracy..... $\pm 0.04\%$ FS
 Precision..... $0.0002''$ W.C.
 Calibration Stability (Pressure Span).. 0.2% Rdg./yr
 Calibration Stability (mA and Voltage)... 0.01% FS/yr
 Calibration Adjustment..... zero tare
 Resolution..... up to 1 ppm
 Compensated Temperature Range ... 40°F to 120°F
 Storage Temperature Range..... 40°F to 160°F
 Temperature Effect (Zero)..... none, zero tare
 Temperature Effect (Span)..... $0.01\%/^{\circ}\text{F}$
 Certification..... NIST traceable certification for reference pressure sensors and voltage/current meters

Control

Controlled Pressure Stability.. $0.0002''$ W.C., typical
 Minimum Controlled Pressure $0.00005''$ W.C.
 Dual Reference Pressure Ranges..... see order info.
 Pressure Types..... gauge and differential
 Overpressure Limit..... 5 psid
 Control Time user selectable

Specifications - General

Pressure Units (Selectable)..... in. W.C., Pa, kPa, mbar, cm W.C.
 Warmup..... 30 minutes
 Reading Rate..... 20 readings/second, typical
 Gravity/Orientation..... negligible
 Shock and Vibration..... 5g, maximum
 Communications..... RS 232
 Display..... 3.5" transfective type TFT color, QVGA, 64-k color
 Keypad..... pocket PC touch pad and external ASCII keyboard plug
 Size..... 11" x 14" x 6" (27.9 cm x 35.6cm x 15.2 cm)
 Weight..... 18 lbs. (8.2kg)
 Pressure Media..... clean, dry, non-corrosive gases
 Power..... 120/240 AC, 50/60Hz, battery NiMH - 8 hours operation
 Pressure Transducer Interface
 Pressure Fittings..... barbed, plug-in o-ring quick connects
 Electrical banana plug jacks
 Voltage Meter $\pm 0.005\%$ FSO at ± 10 VDC
 Current Meter $\pm 0.005\%$ FSO at 4-20mA
 Excitation 24 VDC nominal for 4-20 mA output, 5 to 24 VDC for voltage output

Unique Features

- Additional Features
 - 21 CFR Part 11 Compliant
 - Both pressure generation and monitoring modes to verify HVAC system performance

- Fully Automated Calibration System
 - Easy step-by-step user interface process
 - Designed with built-in leak test function
 - Provides accuracy and stability plots
 - Handles multiple engineering units

- Calibration management database
 - Store and retrieve transducer profiles
 - Generate as found and as left calibration data
 - Print calibration certificates

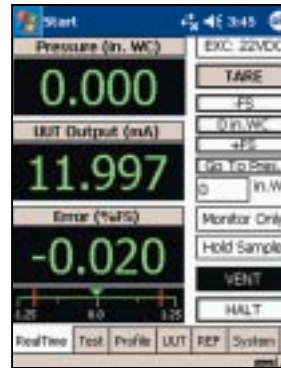
UUT (Unit Under Test) Setup - Step 1

- Select transducer profile from user configurable list
- Select accuracy specification
- Select output (voltage or current)



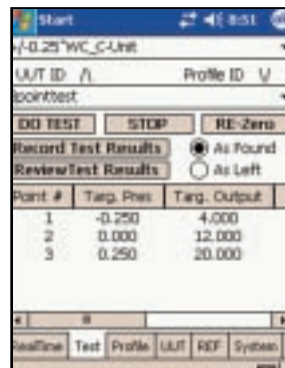
Real Time - Step 2

- Screen allows you to view current pressure and output for calibration and testing
- Apply selected pressure to perform adjustment (zero, span or linearity)



Test - Step 3

- Return to screen to perform calibration test sequence
- Review and record results
- Easily copy and save data in your calibration data base



Portable, Battery-Powered or AC Operation

- Minimum eight (8) hours of operation on full battery charge
- Rugged carrying case with compact size - great for cramped and remote locations



Meet Our Entire Pharmaceutical Family...

● Model 264 Pressure Transducer

- $\pm 0.25\%$ and $\pm 0.40\%$ FS Accuracies
- Excellent Price/Performance Ratio
- 3 Year Unconditional Warranty

● Model 267 Laboratory Grade Pressure Transducer

- $\pm 0.25\%$ and $\pm 0.40\%$ FS Accuracies
- Optional LCD for Critical Applications
- Static Probe for Room Pressure Applications and Direct Duct Mount

● Model 269 High Performance Pressure Transducer

- $\pm 0.15\%$ and $\pm 0.35\%$ FS Terminal-Based Non-Linearity
- Removable Process Head and Detachable Terminal Block for In-Situ Calibration
- Tamperproof Operation via "Security Key" with Push Button "Snap-Back" Zero and Span Adjustment
- Base or Din Rail Mount Design - Minimizing Installation Time
- Calibration Ready by a Electro-Pneumatic Interface Enabling Multi-Featured Automatic Calibration with Model 869



Also Available from Setra

A broad line of counting scales and precision balances. Accurate, reliable performance for every budget. Call or email for details, or order online at www.setrascalesonline.com

Ordering Information

Code all blocks in table.

Example: Part No. 86910R5WD015WDPN for a 869 Calibrator, 0 to 0.5 in. WC (Range One) to 0 to 15 in. WC (Range Two), PDA Included, with a Standard Pharmaceutical User Interface.

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Model 8691 = 869				Range - One Inches W.C.				Range - Two Pascal							
				0R5WD = 0 to 0.5 in. WC 001WD = 0 to 1 in. WC 005WD = 0 to 5 in. WC 2R5WD = 0 to 2.5 in. WC 015WD = 0 to 15 in. WC R25WB = ± 0.25 in. WC 0R5WB = ± 0.5 in. WC 001WB = ± 1 in. WC 2R5WB = ± 2.5 in. WC 005WB = ± 5 in. WC 015WB = ± 15 in. WC				050LB = ± 50 Pa 100LD = 0 to 100 Pa 100LB = ± 100 Pa 250LD = 0 to 250 Pa 250LB = ± 250 Pa 500LD = 0 to 500 Pa 500LB = ± 500 Pa 10CLD = 0 to 1000 Pa 10CLB = ± 1000 Pa 35CLD = 0 to 3500 Pa 35CLB = ± 3500 Pa				PDA P = Includes PDA		User Interface N = Standard User Interface *P = 269 Auto-Cal System	

*Consult factory for details and availability